

Heat Network Projects Quarterly Report

**Scottish Government Supported Heat
Network Projects – March 2023**

Introduction

This document produced by the Energy and Climate Change Directorate in the Scottish Government summarises the projects supported by Scotland's Heat Network Fund (SHNF), Scotland's Heat in Buildings Development Funding Invitation and The Heat Network Support Unit (HNSU).

Launched in February 2022, Scotland's Heat Network Fund (SHNF) makes £300 million available over this parliamentary session. The Fund offers long-term support to enable the rollout of new zero emission heat networks and communal heating systems, as well as the expansion and decarbonisation of existing heat networks across Scotland.

Scotland's Heat in Buildings Development Funding Invitation made £1 million of resource funding available to stimulate and accelerate the development of a pipeline of zero emission heat projects for buildings across Scotland. This funding invitation closed to applications in May 2022, and was forerunner to fuller Heat Network Support Unit, launched in September 2022.

The Heat Network Support Unit (HNSU) supports the growth of heat networks by addressing key challenges in the pre-capital stages of heat network development and building capacity across the public sector to deliver successful projects. The HNSU is sponsored by the Scottish Government (SG), with Scottish Futures Trust (SFT) and Zero Waste Scotland (ZWS) as core partners who will provide a range of support services via the HNSU.

The document includes a series of one-page summaries for each of the capital and pre-capital projects supported by the Scottish Government through the SHNF and HNSU.

Further details on both programmes can be found here:

- Scotland's Heat Network Fund: [Heat Network Fund: application guidance - gov.scot \(www.gov.scot\)](https://www.gov.scot/resources/consultation-papers/collections/documents/HeatNetworkFund-application-guidance.pdf)
- Heat Network Support Unit: [Home - Heat Network Support Unit](https://www.gov.scot/resources/consultation-papers/collections/documents/HeatNetworkSupportUnit-Home.pdf)

For questions relating to the projects summarised in this document or fund enquiries, please direct these to HeatNetworkFund@gov.scot or HeatNetworkSupport@gov.scot.

Heat and Energy Efficiency Scotland Heat Network Investment: Capital and Pre-Capital Projects

Ashgill Road Low Carbon Heat Project

Lead organisation:
Lowther Homes Ltd

Project Stage:
Capital - Construction

Technology type(s):
Shared ground loop array heating system with ground source heat pumps

Location:
Milton, Glasgow

Type of Support:
£388,074 SHNF capital grant

Project Timeframe:
Predicted commissioning 30/09/2024

Project description:
Lowther Homes Ltd (part of Wheatley Group) have been awarded £388,074 worth of funding to install a shared ground loop heat pump system at Ashgill Road, Milton, Glasgow. The project will provide low carbon heating and hot water to a 48-unit new build affordable housing development.

The project is due to begin on site in March 2023 and complete in September 2024.



Figure 1. 3D Image of Lowther Homes affordable housing development plan (Credit: Collective Architecture)

Brandon St, Motherwell – Commissioning of a communal heating system for 48 new building social housing units

Lead organisation:

North Lanarkshire Council

Project Stage:

Capital - Construction

Technology type(s):

Shared ground loop array heating system with ground source heat pumps

Location:

Motherwell, North Lanarkshire

Type of Support:

£415,432 SHNF Grant

Project Timeframe:

Predicted commissioning 31/05/2026

Project description:

North Lanarkshire Council will install a zero direct emissions communal heating system consisting of a shared ground array and heat pumps which will supply heat for 48 social rented flats in Motherwell. The low emissions heat system will provide carbon savings for tenants, reducing their energy bills and contributing to fuel poverty and net zero targets.

The project is due to begin construction in March 2023 and commission in May 2026.



Figure 2. 3D image of North Lanarkshire Council's social housing project plan (© Coltart Earley Architects)

Torry Heat Network – Phase 2

Lead organisation:
Aberdeen City Council

Project Stage:
Capital - Construction

Technology type(s):
Expansion of Torry Heat Network using waste heat from Energy from Waste Plant

Location:
Torry, Aberdeen

Type of Support:
£5,617,358 SHNF Grant

Project Timeframe:
Predicted commissioning 31/03/2026

Project description:
This project expands the Torry Heat Network Phase 1 which was part funded by the Scottish Government's Low Carbon Infrastructure Transition Programme. The heat network distributes heat from a Heat Distribution Facility at Tullos Recycling Centre and a heat offtake at the new Energy from Waste plant at Tullos. Phase 2 will see the connection of a community hub to the network, and enable connections to a further 556 homes. As part of the project, there will be a wider engagement strategy to encourage wider uptake.

The second phase is due to commission in March 2026.



Figure 3. Torry Heat Network Energy Centre (© Ewan Jures, WSP UK Ltd)

Edinburgh BioQuarter

Lead organisation

City of Edinburgh Council

Project Stage:

Pre-capital – Detailed Feasibility

Technology type(s):

Proposed new heat network or connection to existing heat network (heat source: energy from waste)

Anticipated Delivery Model:

Service Concession / Independent Heat Network provider

Location:

BioQuarter site, Little France Drive, Edinburgh

Type of support:

£47,125 HNSU Grant

Project Timeframe:

Completion of feasibility study by 30 March 2023

Project description:

The project explores the supply of heat to the Edinburgh BioQuarter site via a heat network. This is proposed to serve new buildings on Edinburgh's BioQuarter site masterplan, with connection to existing buildings on site in due course, including the NHS Royal Infirmary of Edinburgh and the Royal Hospital for Children and Young People, and the potential to serve social housing off-site. The feasibility study examines the potential for a new heat network or connection to the upcoming Shawfair Heat Network in Midlothian.



Figure 4. Aerial view of the Edinburgh BioQuarter site (Credit: Oberlanders Architects)

Abertay University

Lead organisation:
Abertay University

Project Stage:
Pre-capital – Feasibility / Strategic Outline Business Case

Technology type(s):
Proposed new campus heat network using sewer and air source heat pump technology

Location:
Abertay University, Dundee

Type of support:
Capacity building and OBC support

Project Timeframe:
Full business case estimated to be completed by Summer 2023

Project description:
The feasibility and strategic business case set out the University Campus Masterplan, which has sustainability, low and net zero carbon as its primary driver. Full implementation of the scheme will secure a net zero carbon and sustainable future for the university, providing the facilities that students and staff require, underpinned by an efficient and resilient heat network. The masterplan prioritises a new Energy Centre. The Campus strategy embraces multi-mode energy systems which will combine renewable sources with the primary sewer and air source heat pump solution. The Energy Centre will distribute the heat network to 7 buildings on the city centre Campus. The project is seeking funding and specialist technical support for the completion of a strategic business case.



Figure 5. Abertay University Masterplan Vision (Credit: Abertay University)

Dundee Caird Park

Lead organisation:
Dundee City Council

Project Stage:
Pre- Capital – Detailed Feasibility Study

Technology type(s):
Existing heat network extension

Location:
Regional Performance Centre for Sport, Dundee

Type of support:
£34,000 HNSU Grant

Project Timeframe:
Feasibility report due March 2023

Project description:
The Caird Park project was originally supported by the Low Carbon Infrastructure Transition Programme. A pre-feasibility study to expand the network was published in January 2022 as part of an initiative to boost heat networks by the Scottish Cities Alliance. This study analysed opportunities to expand the existing network towards additional heating loads (a school, a college, a sports centre and a gymnastics centre). The project aims to deliver these expansions to their heat network.



Figure 6. Regional Performance Centre, Dundee (Credit: Dundee City Council)

Inverness West Bank

Lead organisation:
The Highland Council

Project Stage:
Pre-Capital – Detailed Feasibility Study

Technology type(s):
Proposed new heat network

Location:
Inverness

Type of support:
£36,000 HNSU Grant

Project Timeframe:
Feasibility report due March 2023

Project description:
The Highland Council are looking to establish district heating networks within Inverness. The main buildings identified for connection include Inverness Leisure Centre, Inverness Ice Centre, Highland Archive and Registration Centre, Inverness Botanic Gardens, Highland Council HQ and Eden Court.



Figure 7. Eden Court and the Highland Council offices, Inverness (Credit: Buro Happold on behalf of Zero Waste Scotland)

Inverness Castle

Lead organisation:
The Highland Council

Project Stage:
Pre-Capital – Detailed Feasibility Study

Technology type(s):
Proposed new heat network

Location:
Inverness

Type of support:
£27,500 HNSU Grant

Project Timeframe:
Feasibility report due March 2023

Project description:

Highland Council are looking to develop a district heating network within the immediate area surrounding Inverness Castle which is a council administration centre. Potential heat sources include ground source heat pumps, river source heat pumps, sewer heat recovery, biomass and large scale air source heat pumps.



Figure 8. Inverness Castle (Credit: Buro Happold on behalf of Zero Waste Scotland)

Perth City Centre Heat Network

Lead organisation:

Perth and Kinross Council

Project Stage:

Pre-Capital – Feasibility

Technology type(s):

Proposed new heat network

Location:

Perth

Type of support:

£36,000 HNSU Grant

Project Timeframe:

Feasibility report due March 2023

Project description:

Various non-domestic and domestic buildings including a concert hall, council offices, tower blocks and a hotel have been identified within Perth city centre that are potential connections for a heat network. A range of low carbon heat sources are recommended to be considered including river and ground source heat pumps.



Figure 9. River Tay (Source: Buro Happold on behalf of Zero Waste Scotland)

Blar Mhor

Lead organisation:

NHS Highland / University of the Highlands and Islands

Project Stage:

Pre-Capital – Detailed Feasibility Study

Technology type(s):

Proposed new heat network

Location:

Fort William

Type of support:

£17,000 HNSU Grant

Project Timeframe:

Feasibility report March 2023

Project description:

Proposed heat network to serve the Blar Mhor development site, including connections to the proposed STEM centre for UHI – West Highland College and NHS General Highland hospital. Air source and ground source heat pumps are being considered as heat supply technology.



Figure 10. Proposed energy centre and connections locations (Source: Buro Happold on behalf of Zero Waste Scotland)

Glasgow Polmadie – GRREC Heat Network

Lead organisation:
Glasgow City Council

Project Stage:
Pre-Capital – Detailed Feasibility Study

Technology type(s):
Proposed new heat network

Location:
Glasgow

Type of support:
£42,000 HNSU Grant

Project Timeframe:
Feasibility report due June 2023

Project description:

Project secured grant funding to undertake a review of prior feasibility work to determine the potential for the Glasgow Recycling and Renewable Energy Centre (GRREC) to be used as a heat source for a district heat network serving a mix of domestic and non-domestic properties in the south side of Glasgow.



Figure 11. Glasgow Recycling and Renewable Energy Centre (GRREC) (© Calum Robertson, Zero Waste Scotland)

Queen's Quay Extension

Lead organisation:

West Dunbartonshire Council

Project Stage:

Pre-Capital - OBC

Technology type(s):

Extension of existing heat network (heat source: water source heat pump)

Anticipated Delivery Model:

Contracted via Vital Energie

Location:

Clydebank

Type of support:

Capacity building and OBC support

Project Timeframe:

OBC submitted December 2022

Project description:

The project proposes the extension of the Queens Quay heat network to connect to the Golden Jubilee Hospital and hotel as well as nine of West Dunbartonshire Council's multiblock flats at Dalmuir and Littleholm (6 currently on electric, 3 on gas).



Figure 12. Queen's Quay Energy Centre (Credit: West Dunbartonshire Council)

Granton Waterfront

Lead organisation:

City of Edinburgh Council

Project Stage:

Pre-Capital – OBC complete and entering commercialisation

Technology type(s):

Proposed new heat network (proposed heat source: sewer source heat pump)

Location:

Granton, Edinburgh

Type of support:

£50,000 Scotland's Heat in Buildings Development Funding Invitation Grant

Project Timeframe:

OBC submitted 13th March 2023

Project description:

The project proposes a new heat network to serve new buildings on the Granton development site. The site is of mixed use with approx 3000 homes and 9,000m² non-domestic space, including a primary school, medical centre, business, retail and leisure. The projects looks to create the heat network with the potential to connect to nearby areas of heat demand to the south of site including existing schools and a leisure centre.

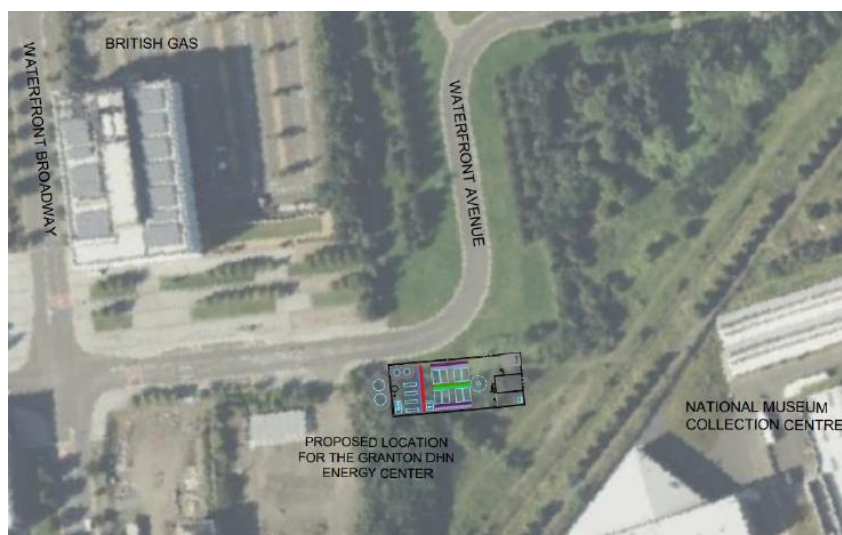


Figure 13. Proposed location of energy centre (© Ramboll)

Edinburgh Airport Low Carbon Heat Network

Lead organisation:
Edinburgh Airport Ltd

Project Stage:
Pre-Capital - OBC

Technology type(s):
Proposed new heat network

Location:
Edinburgh Airport, Edinburgh

Type of support:
£42,350 Scotland's Heat in Buildings Development Funding Invitation Grant

Project Timeframe:
OBC due to be submitted end of April 2023

Project description:
The project will develop the technical and economic case for a district heat network which would supply heat to Edinburgh Airport, while acknowledging opportunities for future expansion to the Crosswinds and West Town developments (eg with regard to energy centre/pipe sizing).

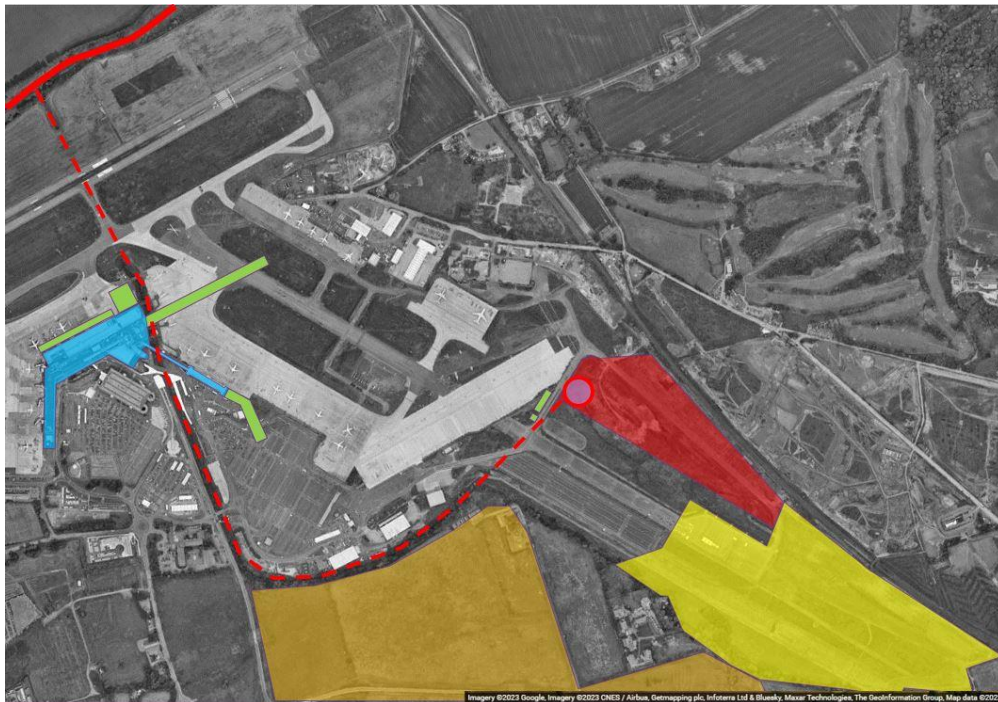


Figure 14. Aerial view of Edinburgh Airport Heat Network proposed scale (©Google Images)

Hamilton Heat Network

Lead organisation:

South Lanarkshire Council

Project Stage:

Pre-Capital – Detailed Feasibility Study

Technology type(s):

Proposed new heat network

Location:

Hamilton

Type of support:

£35,000 HNSU Grant

Project Timeframe:

Feasibility report submitted January 2023

Project description:

Proposed heat network centred around the council headquarters, and investigating the connection of several other non-domestic public sector properties, tower blocks and proposed new-build housing in the area. Ground source heat pumps are the recommended primary heat supply technology.



Figure 15. South Lanarkshire Council HQ Building (© Calum Robertson, Zero Waste Scotland)

Blindwells Heat Network

Lead organisation:
Hargreaves Land

Project Stage:
Pre-Capital – Detailed Feasibility Study

Technology type(s):
Proposed new heat network

Location:
Blindwells, East Lothian

Type of support:
£30,000 HNSU Grant

Project Timeframe:
Feasibility report submitted February 2023

Project description:

The project involves a quarry and mine regeneration scheme creating new-build residential and commercial properties. A suggested approach is recovering heat from minewater which will be fed through an ambient loop to households each of which will have individual heat pumps.



Figure 16. Water treatment reed bed lagoons at minewater site (Credit: Buro Happold on behalf of Zero Waste Scotland)

Edinburgh Gracemount

Lead organisation:

City of Edinburgh Council

Project Stage:

Pre-Capital – Detailed Feasibility Study

Technology type(s):

Proposed new heat network

Location:

South Edinburgh

Type of support:

£45,000 HNSU Grant

Project Timeframe:

Feasibility report submitted February 2023

Project description:

Network for public sector buildings including council-owned offices, an NHS health centre and an Edinburgh Leisure building in close proximity. The project proposes using both air source and ground source heat pumps to provide low carbon heat.



Figure 17. Gracemount Primary School (Credit: Buro Happold on behalf of Zero Waste Scotland)



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